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Patent Application

of

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for

DEVICE FOR DAMPING PRESSURE SURGES

Field of the Invention

The present invention relates to a device for damping pressure surges in a fluid. The device has a housing and a piston displaceable longitudinally against the pretensioning force of a spring-type accumulator.

Background of the Invention

Devices for damping pressure surges include hydraulic accumulators. One of the main functions of hydraulic accumulators is to receive specified volumes of a pressurized fluid of a hydraulic system and to return them to the system as required. Since the fluid is pressurized, hydraulic accumulators are treated as pressure vessels and must be designed to withstand the maximum operating pressure as determined by the approval standard. For volume equalization in the hydraulic accumulator and as a result the associated storage of energy, the pressurized fluid in the hydraulic accumulator is subjected to the force exerted by a weight, spring, or gas. Equilibrium always prevails between the pressure of the pressurized fluid and the opposing pressure generated by the force of the spring or by the gas. In most hydraulic systems, use is made of hydropneumatic accumulators, that is, ones subjected to the action of a gas and having a separating element. A distinction is made between bladder, piston-type, and diaphragm accumulators.